

# HCD-S-MOD



HCD-S / E2-05XX-MOD

## BENEFITS

- Measures relative humidity and temperature
- Outstanding accuracy, repeatability and long-term stability
- Standardized MODBUS RTU communication allows an easy design and minimizes the installation costs
- Low power consumption

## APPLICATIONS

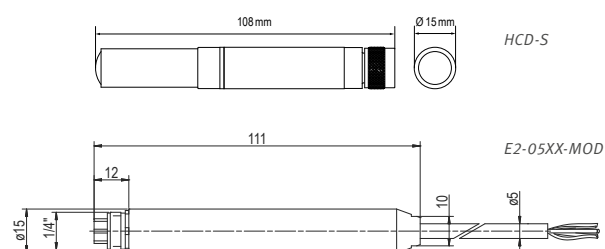
- Pharmaceutical industry
- Food industry
- Building services equipment
- Paper and textile



## Technical Information

| Technical data                     |                          |
|------------------------------------|--------------------------|
| Order code                         | HCD-S-MOD                |
| Consist of                         | HCD-S & E2-05XX-MOD      |
| Range of application (humidity)    | 0...100 %rh              |
| Range of application (temperature) | -40...85 °C              |
| Humidity sensor                    | HYGROMER HT-1            |
| Long-term stability                | <1 %rh/year              |
| Accuracy                           | ±0.8 %rh, ±0.1 K @ 23 °C |
| Material                           | Polycarbonate            |

### Dimensions



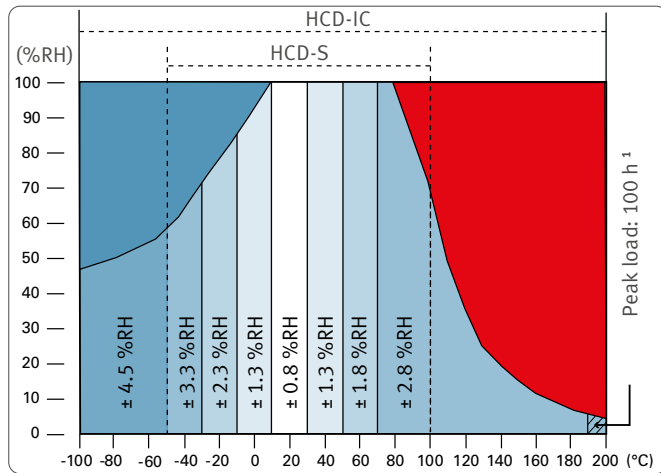
| Technical data HCD-S and E2-05XX-MOD      |                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------|
| Humidity sensor                           | HYGROMER HT-1                                                                  |
| Temperature sensor                        | PT1000, Class 1/3 B                                                            |
| Operating humidity                        | 0...100 %rh                                                                    |
| Operating temperature                     | Probe and cable: -40...70 °C<br>HCD-S: -40...85 °C<br>E2-05XX-MOD: -40...70 °C |
| Accuracy @ 23 °C                          | ±0.8 %rh ±0.1 K                                                                |
| Long-term stability                       | 1 %rh / year                                                                   |
| Startup time                              | 100 ms                                                                         |
| Measurement interval                      | 500 ms                                                                         |
| Response time sensor                      | t63: <15 s without filter, (temperature and humidity)                          |
| Maximum wind velocity                     | 3.5 m/s without filter                                                         |
| Supply voltage                            | 5...28 VDC with cable E2-05XX-MOD<br>Probe only: 2.8...5.5 VDC                 |
| Current consumption cable and probe @ 24V | 2.5 mA                                                                         |
| Protection rating                         | IP65 (except sensor area)                                                      |
| Material                                  | Polycarbonate                                                                  |
| Protocol / Interface                      | Modbus RTU / RS-485                                                            |

## Possible Filters

| Order code   | Filter carrier       | Filter element      | Pore size | Application range |
|--------------|----------------------|---------------------|-----------|-------------------|
| SPA-PCB-PE   | Polycarbonate, black | Polyethylene, white | 40-50 µm  | -50...100 °C      |
| SPA-PCB-PTFE |                      | PTFE, white         | 10 µm     |                   |
| SPA-PCB-WM   |                      | Wire mesh 1.4401    |           |                   |

## Accuracy of HCD Probes

Humidity Window



Temperature Window

